

Amendments to the Claims:

1. (currently amended) A method of transmitting a data packet on a communication path from a first communication node to a second communication node in a mobile network, the method comprising the steps of:

the first communication node receiving a route message from said second communication node, wherein said route message includes a list of a plurality of intermediary addresses between said first communication node and said second communication node, the plurality of intermediary addresses comprising an address of a mobile router;

the first communication node generating a preferred communication path in response to said list of intermediary addresses; and

the first communication node transmitting said at least one data packet from said first communication node to said second communication node via said preferred communication path.

2. (currently amended) The method of transmitting a data packet according to Claim 1, wherein said ~~data-communication mobile~~ network supports nested network mobility operation and said step of transmitting includes the step of:

routing said at least one data packet via a plurality of mobile routers identified by said intermediary addresses in said ~~nested-mobility mobile~~ network.

3. (currently amended) The method of transmitting a data packet according to Claim 1, wherein said ~~data-communication mobile~~ network operates in accordance with an IPv6 and/or IPv4 specification.

4. (previously presented) The method of transmitting a data packet according to Claim 1, wherein said first communication node is a correspondent node of the said second communication node and/or said second communication node is a mobile network node.

5. (currently amended) The method of transmitting a data packet according to Claim 1, the method further comprising the step of:

sending ~~an~~ a care-of route advertising message, by a plurality of communication nodes in the mobile network, that includes route information

related to communication nodes attached to said second communication node, so that a communication path to an intended recipient can be determined.

6. (previously presented) The method of transmitting a data packet according to Claim 1, wherein said list of the plurality of intermediary addresses includes addresses of one or more mobile routers above the second communication node in a route hierarchy for delivering said data packet to an intended recipient.

7. (currently amended) The method of transmitting a data packet according to Claim 5, the method further comprising the step of:
requesting transmission of one or more care-of route advertisement messages, containing route information of one or more IP addresses, from adjacent communication nodes when said second communication node moves to a new location within the mobile network.

8. (currently amended) The method of transmitting a data packet according to Claim 5, the method further comprising the steps of:
extracting intermediary route messages from said route information in said care-of route advertising message at a communication node; and
transmitting said intermediary route messages to communication nodes that the extracting communication node serves.

9. (currently amended) The method of transmitting a data packet according to Claim 8, the method further comprising the step of:
appending a route message of the communication unit to said list of intermediary routes in said care-of route advertising message at said communication node.

10. (currently amended) The method of transmitting a data packet according to Claim 5 further comprising the step of:
sending periodically said care-of route advertising message to all or a selected number of communication nodes in the mobile network.

11. (previously presented) The method of transmitting a data packet according to Claim 5, the method further comprising the step of:

sending a mobile network prefix advertisement message by a mobile router at a top of a routing hierarchy in the mobile network to advertise said mobile network prefix; and

determining by communication nodes in the same mobile network that they are located within the sending mobile router's mobile network.

12. (previously presented) The method of transmitting a data packet according to Claim 1, the method further comprising the step of:

sending an extended binding update message containing route information only to communication nodes outside of the sending communication node's mobile network.

13. (canceled).

14-16. (canceled).

17-18. (canceled).

19-26. (canceled)

27. (new) A first communication node for transmitting a data packet on a communication path to a second communication node in a mobile network, the first communication node comprising:

means for receiving a route message from said second communication node, wherein said route message includes a list of a plurality of intermediary addresses between said first communication node and said second communication node, the plurality of intermediary addresses comprising an address of a mobile router;

means for generating a preferred communication path in response to said list of intermediary addresses; and

means for transmitting said at least one data packet from said first communication node to said second communication node via said preferred communication path.